BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK:- IMPROVEMENTS TO GOVT. SCHOOL BUILDING IN KODIGEHALLI IN WARD NO. 8

DRAFT TENDER SCHEDULE

Item No	Description of Work	Unit	Total Quantity as per Estimation	Rate as per estimate in Rs.	
				In Figures	In Words
1	Dismantling of existing structures like culverts,bridges,retaining walls and other structure comprising of masonry,cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications.and directions of the Engineer in charge.	Cum	0.45	798.12	
2	Dismantling Mangalore tiles roof and stacking the material within a radius of 50 meters. - - with reepers. complete as per specifications.and directions of the Engineer in charge.	Sqm	167.40	79.92	
3	Dismantling of existing structures like culverts,bridges, retaining walls and other structure comprising of masonry, cementconcrete, wood work, steel work, including T&P and scaffolding whereverneccessary, sorting the dismantled material, disposal of unserviceablematerial and stacking the serviceable material with all lifts complete as per specifications.and directions of the Engineer in charge.	Cum	105.70	379.08	
4	Dismantling cement concrete flooring or plain cement concrete work including removing and conveying the debris to distance upto 200m (within average thickness of 15 cms) complete as per specifications.and directions of the Engineer in charge.	Sqm	156.24	92.88	
5	.Dismantling plastering and removing the debris with a lead upto 200m. complete as per specifications.and directions of the Engineer in charge.	Sqm	460.92	39.96	
6	Conveying the excavated earth, debries etc., with all lead and lifts including loading and unloading charges etc., complete as per the direction of the Engineer-in-charge.	Cum	138.82	64.92	
7	Earthwork excavation for foundation of buildings, water supply, sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in hard soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the exavated soil clear from edges of excavation with lead upto 50 m. after breaking of clods complete as per specifications.and directions of the Engineer in charge.	cum	20.69	484.92	
8	Providing and laying in position plain cement concrete of mix 1:4:8(M7.5)with OPC cement @ 180kgs, with 40mm and down size graded granite metal coarse aggregates @0.85cum and fine aggregtes @ 0.57cum machine mixed, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications.and directions of the Engineer in charge.	Cum	1.08	5510.16	

Item No	Description of Work	Unit	Total Quantity as per Estimation	Rate as per estimate in Rs.	
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15	Waterproofing of RCC Terrace / podium slab / toilet / utilities / water retaining structure by preparing the surface by chipping and cleaning and Grouting of Honey comb, voids,cracks / construction joints with cement slurry (1kg cement added in 10 ltr of water) added with 100gm of inorganic accelerator, followed by spraying of liquid biological modified alkaline earth silicates @ 0.40 ltr per sqm on whole surface to reduce the micro porosity and allowing it to dry, curing the surface for the silicates to penetrate deeper into the concrete and spraying waterproofing impregnate liquid containing silane and silanol linear copolymer @ 0.50 ltr per sqm and finally applying polymer slurry made out of cross linked acrylic / styrene / butadiene & cement in the ratio of 1:0.1, @0.50kg/sqm on the whole surface, including all labour charges tools and equipments, all complete as per specifications.and directions of the Engineer in charge.	Sqm	44.46	568.08	
16	Earthwork excavation for foundation of buildings, water supply, sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in hard soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the exavated soil clear from edges of excavation with lead upto 50 m. after breaking of clods complete as per specifications.	Cum	59.96	484.92	
17	Providing and Filling in foundation with granite / trap broken metal 100mm. and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour with all lead and lift. complete as per specifications.and directions of the Engineer in charge.	Cum	10.55	2623.32	
18	Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @0.892cum and fine aggregates @ 0.465cum machine mixed, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications.and directions of the Engineer in charge.	Cum	25.72	5609.52	
19	Providing and laying in position plain cement concrete of mix M20 with OPC cement @ 300kgs, with 20mm and down size graded granite metal coarse aggregates @0.69cum and fine aggregtes @ 0.43cum, with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, including cost of all materials, labour, HOM of machinery, curing complete as per specifications.and directions of the Engineer in charge.	Cum	18.38	5754.24	
20	Providing and constructing granite / trap / basalt size stone masonry in foundation cement mortar 1:6, stone hammerddressed in courses not less than 20 cms high, bond stones at 2m apart in each course including cost of materials, labour, curing complete as per specifications.and directions of the Engineer in charge.	Cum	20.95	4963.68	

Item No	Description of Work	Unit	Total Quantity as per Estimation	Rate as per estimate in Rs.	
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21	Providing and constructing granite / trap / basalt size stone masonry in superstructure with cement mortar 1:4 , edges of stones chistle dressed in courses not less than 15 cms high, bond stones at two m. apart in each course including cost of materials, labour, scaffolding, curing complete as per specifications.and directions of the Engineer in charge.	Cum	16.79	6485.40	
22	Providing ruled pointing to coursed stone masonry with cement mortar 1:3, 20mm deep, after raking joints to depth of 20mm nicely lining, including cost of materials, labour, curing complete as per specifications.and directions of the Engineer in charge.	Sqm	16.91	153.36	
23	Filling available excavated earth (excluding rock) in sides of foundations upto plinth in layers not exceeding 20 cms. in depth, compacting each deposited layer by ramming after watering with lead upto 50 m. and lift upto 1.5 m. including cost of all labour complete as per specifications.and directions of the Engineer in charge.	Cum	2.73	217.08	
24	Conveying the excavated earth, debries etc., with all lead and lifts including loading and unloading charges etc., complete as per specifications.and directions of the Engineer in charge.	Cum	57.24	69.24	
25	Providing and fixing M.S.Grill over existing compound wall as per Chief Architect drawing No. 12686, using 16mm x 16mm M.S.Square rod at 150mm c/c spacing and 6mm x 40mm M.S. flats at horizontal and 6mm x12mm M.S. flat for ornamental design and providing shop edge design at the vertex of every vertical rods, including welding, grinding wherever necessary. All the steel surface should be thoroughly cleaned free of rust and painted with anti corrosive paint (shop paint) etc., complete. The work includes cost of all materials, labour charges for all items of work, hire charges for welding, cutting and grinding equipment, and electricity charges, etc., complete as per specifications.and directions of the Engineer in charge.	Sqm	200.88	5798.52	
26	Providing and removing centering, shuttering, strutting, propping etc. and Removal of form Work for columns, pillars, piers, post and struts, square / rectangular / polygon in plan including cost of all materials, labour complete as per specifications.and directions of the Engineer in charge.	Sqm	34.68	492.48	
27	Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for suspended floors, landings, balconies and likes, thickness upto 200 mm including cost of all materials, labour complete as per specificaitons for heights more than 3.50m from ground level. - 0 to 5 mtrs.	Sqm	102.96	432.00	
28	Providing and removing centering, shuttering, strutting, propping etc., for edges of slabs and breaks in floors including cost of all materials,labour complete as per specifications.and directions of the Engineer in charge.	Sqm	6.30	815.40	
29	Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for sides and soffits of beams, beam haunchings, cantilever girders, bressumers and lintels not exceeding 1m in depth including cost of all materials, labour complete as per specifications.and directions of the Engineer in charge.	Sqm	69.42	315.36	

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30	Providing and removing centering, shuttering, strutting, propping etc., for chajjas, corbels etc. , including edges including cost of all materials, labour complete as per specifications.and directions of the Engineer in charge. **Second Floor**	Sqm	6.36	348.84	
31	Providing and laying in position reinforced cementconcrete of design mix M25 with OPC cement @ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.70cum andfine aggregtes @ 0.47cum,with superplastisiser @3lts confirming to IS 9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms thick,vibrated fo all works in ground Floor level for roof slabs ,staircase, lintels , beams, retaining walls ,return wall, walls (an thivck ness) including attached plasters ,columns, pillars,posts,struts.butters,string or lacing courses ,parapets,coping,bed blocks,anchor blocks ,plain window cills,fillets including cost of all materials, labour,HOM of machinery, curing, complete as per specifications.and directions of the Engineer in charge. **Second Floor**	Cum	3.68	6658.20	
32	Providing and laying cement concrete using 20 mm and down size granite coarse aggregates and fine aggregates of ready mixed concrete (RMC) for R.C.C works laid in 15 cms thick layers and well compacted including vibrating, curing, etc for all super Structure works with all lead and Lift etc., complete as per specifications.and directions of the Engineer in charge. **Second Floor**	Cum	22.20	5936.76	
33	KSRB 4.2.11 : Providing and laying in position reinforced cement concrete of design mix M20 with OPC cement @ 27.20kgs, with 12mm and down size graded granite metal coarse aggregates @0.5865cum and fine aggregtes @ 0.391cum, with superplastisiser @0.225lts, machine mixed, well compacted for plain chajja of 8.5 cms. average thickness, upto First Floor level, including cost of all materials, labour, HOM of machinery, finishing, curing, **Second Floor** complete as per specifications. Specification No. KBS 4.1, 4.6 Pg No.15 Item no.4.20	Sqm	5.04	546.48	
34	KSRB 4.9.2 : Providing T.M.T bars Fe 500 steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications.and directions of the Engineer in charge. **Second Floor**	tonne	3.95	78258.96	

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9	Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for foundations, footings, bases of columns for mass concrete including cost of all materials, labour complete as per specifications.and directions of the Engineer in charge.	Sqm	47.34	278.64	
10	Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for suspended floors, landings, balconies and likes, thickness upto 200 mm including cost of all materials, labour complete as per specifications.and directions of the Engineer in charge.	Sqm	10.89	432.00	
11	Providing and laying in position reinforced cement concrete of Design mix M25 with OPC cement @ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.70 cum and fine aggregtes @ 0.47cum, with super plasticisers @ 3 liters confirming to is 9103-1999 reafirmed-2008 at machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in foundation for footings, pedastals, retaining walls, return walls, walls (any thickness) including attached pilasters, columnspillars, posts, struts, buttresses, bed blocks, anchor blocks & plinths etc., including cost of all materials, labour, HOM of machinery, curing, complete as per specifications.and directions of the Engineer in charge.	Cum	6.66	6276.96	
12	Providing T.M.T bars Fe 500 steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications.and directions of the Engineer in charge.	Ton	0.83	76643.28	
13	Providing 20mm square M.S footrest and fixing in manhole Nos 232.00 with M 10 cement concrete block of 20x20x10cms, using 20mm and down size metal of size including cost of materials, labour charges, curing complete as per specifications.and directions of the Engineer in charge.	No.s	4.00	298.08	
14	Conveying the excavated earth, debries etc., with all lead and lifts including loading and unloading charges etc., complete as per specifications.and directions of the Engineer in charge.	Cum	20.69	67.09	

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35	*Fabricating, supplying and erecting M.S. TubularTruss of* span upto 10m. The bottom and top member is provided with 50x50x6mm double equal angles, welded back to back and in between top and bottom line, in areas of mid section is provided with 50x50x6mm equal single angle for vertical and inclined members and at supporting ends 40x40x5mm single angle is provided. All the members are welded together with 6mm gusset plate as per Drawing. The entire truss is anchored in RCC column by using 4 Nos. of M.S. anchor bolts at each support, with 10mm thick base plate and shoe plate.The work includes cutting, straightening, placing in position of M.S angle and wleding wherever necessary, and applying one coat of red oxide primer coat to all themembers including cost of all materials, labour charges, and hire charges of machineries for cutting, welding, grinding and erection equipments, with all lead and lift, transportation, etc., complete as per specifications.and directions of the Engineer in charge.	kgs	420.65	139.32	
36	PROVIDING TRAPEZOIDAL PROFILED SHEET Providing and installing of pre painted Galvolume iron Trapezoidal profiled sheet of approved make 1060 mm width (1000 mm cover width), 28-30 mm crest height with crest distance of 200 mm c/c with 2 ribs at the centre for stiffening. The total coated thickness (TCT) of the sheet will be 0.47 mm +/- 0.02 mm tolerance Zinc-Alu Alloy coating AZ150 gsm as per ASTM 1397/A755-550 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 20-22 microns using self drilling/self tapping screws of 25 mm length, to be fixed over the existing purlins, rafters, channels and trusses. complete as per specifications.and directions of the Engineer in charge.	Sqm	17.64	762.48	
37A	Providing and constructing load bearing wall with solid concrete blocks of size 400X200X200mm having block density not less than 1800kg/m3 having a minimum average compressive strength 5.00N/mm2 confirming to IS 2185 (part 1) :2005 and constructed with cement mortar 1:4,as per IS 2572:2005 including cost of materials, labour charges, scaffolding, curing, hire charges of machinaries etc., complete as per specifications.and directions of the Engineer in charge.	Sqm	40.32	984.96	
37B	Providing and constructing load bearing wall with solid concrete blocks of size 400X200X200mm having block density not less than 1800kg/m3 having a minimum average compressive strength 5.00N/mm2 confirming to IS 2185 (part 1) :2005 and constructed with cement mortar 1:4,as per IS 2572:2005 including cost of materials, labour charges, scaffolding, curing, hire charges of machinaries etc. complete as per specifications.and directions of the Engineer in charge. **Second Floo**r,	Sqm	88.70	1060.56	

Item No	Description of Work	Unit	Total Quantity as per Estimation	Rate as per estimate in Rs.	
				In Figures	In Words
38A	Providing and constructing non-load bearing wall with solid concrete blocks of size 400X100X200 having a block density not less than 1800kg/m3 having a minimum average compressive strength of 4.00 N/mm2 conforming to I.S : 2185 (Part 1) : 2005 and constructed with CM 1:4, as per IS 2572:2005 including cost of all materials, labour charges, scaffolding, curing, hire chargesof machineries etc. complete as per specifications.and directions of the Engineer in charge., **Second Floo**r	Sqm	7.20	951.48	
38B	Providing and constructing non-load bearing wall with solid concrete blocks of size 400X100X200 having a block density not less than 1800kg/m3 having a minimum average compressive strength of 4.00 N/mm2 conforming to I.S : 2185 (Part 1) : 2005 and constructed with CM 1:4, as per IS 2572:2005 including cost of all materials, labour charges, scaffolding, curing, hire chargesof machineries etc., complete as per specifications.and directions of the Engineer in charge. **Third Floor**	Sqm	54.36	989.28	
39A	Providing 18mm thick cement plaster in single coat with cement mortar 1:4, to brick masonry including rounding off corners. wherever required smooth rendering, Providing and removing scaffolding, including cost of materials, labour, curing **Ground Floor** complete as per specifications.and directions of the Engineer in charge.	Sqm	80.64	281.88	
39B	Providing 18mm thick cement plaster in single coat with cement mortar 1:4, to brick masonry including rounding off corners. wherever required smooth rendering, Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications.and directions of the Engineer in charge. **Second Floo**r	Sqm	118.68	307.80	
39C	Providing 18mm thick cement plaster in single coat with cement mortar 1:4, to brick masonry including rounding off corners. wherever required smooth rendering, Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications.and directions of the Engineer in charge. **Third Floor**	Sqm	108.72	320.76	
40	Providing 12mm thick cement plaster in single coat with cement mortar 1:4 , to brick masonry including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications.and directions of the Engineer in charge. **Second Floor**	Sqm	114.96	233.28	
41	Providing 12mm thick cement plaster in single coat with cement mortar 1:4 , to ceiling including rounding off corners wherever required smooth rendering, : including Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications.and directions of the Engineer in charge. **Second Floor**	Sqm	103.78	255.96	

Item No	Description of Work	Unit	Total Quantity as per Estimation	Rate as per estimate in Rs.	
				In Figures	In Words
42	Providing applying two coats of wall putty to inside plastered walls and ceiling using white cement putty . Scrapping and levelling the surface using steel blade and preparing the surface even and smooth by using different grade sand papers, including cost of alll mateerial cost of labour and scaffolding etc. , complete as per specifications.and directions of the Engineer in charge.	Sqm	218.74	84.24	
43	Providing and applying painting in two coats with plastic emulsion paint of approved brand on wall surface to give an even approved shade after thoroughly brushing the surface, free from mortar drops and other foreign matter including preparing the surface even and sand paper smooth, cost of materials, labour, complete as per specifications.and directions of the Engineer in charge.	Sqm	114.96	97.20	
44	Providing and applying two coats with oil bound washable distemper of approved brand and shade on wall surface including priming coat with distemper primer after throughly brooming the surface free from mortar drops and other foreign matter including preparing the surface even and sand paper smooth, cost of materials, labour, complete as per specifications.and directions of the Engineer in charge.	Sqm	103.78	127.44	
45A	Providing external walls with texture finish using approved brand paint, applied uniformly in three coats over one coat of primer including cost of all materials, machineries, labour, transportation, loading and unloading, all lead and lift and all other incidental charges including scaffolding and removing stains, complete as per specifications.and directions of the Engineer in charge. **Grond Floor**	Sqm	716.52	367.20	
45B	Providing external walls with texture finish using approved brand paint, applied uniformly in three coats over one coat of primer including cost of all materials, machineries, labour, transportation, loading and unloading, all lead and lift and all other incidental charges including scaffolding and removing stains, complete as per specifications.and directions of the Engineer in charge. **Second Floor**	Sqm	227.40	384.48	
46	Providing and laying Hassan Green / River Pink granite flooring for staircase, treads and rises using pre polished 20 mm thick water cut green Granite slab laid over existing cement concrete bed in CM 1:3, average 20mm thick including full rounding for nosing , cutting 3 line grooves not more than 2 mm wide for antiskidding, including cost of all materials,mortar,labour,curing etc., complete as per specifications.and directions of the Engineer in charge.	Sqm	53.20	4812.48	

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				In Figures	In Words
47	Providing and laying M-15 cement concrete flooring, 50 mm thick with metallic concrete hardner topping , under layer of 35mm thick m-15 cement concrete using broken granite metal of 20mm and down size, and top layer 50mm thick of metallic cement hardner consisting of mix 1:2 (1 cement hardner mix : 2 granite metal 10mm nominal size) by volume, with which metallic hardening compound of approved quality mix in the ratio of 4:1 (4 part of cement and 1 part of metallic floor hardening compound of approved quality by wt) , including finishing cost of materials, labour, curing, complete as per specifications.and directions of the Engineer in charge. **Second Floor**	Sqm	89.74	685.80	
48	Providing and fixing Vetrified glazed tiles of approved make quality & colour of size 900x900x 12mm thick fixed on bed of 12mm thick cement mortar for flooring ,skirting ad jointed with neat cement slurry mixed with pigment to match shade of tiles, including providing spacers at required interval and removing stains etc including Cost of all materials mortar labour etc complete as per specifications.and directions of the Engineer in charge. **Second Floor**	Sqm	100.58	1232.28	
49	Providing and laying integral cement based waterproofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc., consisting of following application. (a) Applying and grouting a slurry coat of neat cement using 2.75 kg/sqm of cement admixed with proprietary water proofing compound conforming to IS:2645 over the RCC slab after cleaning the surface before treatment. (b) Laying cement concrete using broken brick bats 25mm to 100mm size with 50% of cement mortar 1:5 admixed with proprietary water proofing compound conforming IS:2645 over 20mm thick layer of cement mortar 1:5 admixed with proprietary water proofing compound to required slope and treating similarly the adjoining walls upto 300mm height including rounding off junctions of walls and slabs. (c) After two days of proper curing, applying a second coat of cement lurry admixed with proprietary water proofing compound (d) Finishing the surface with 20mm thick jointless cement mortar of mix 1:4 admixed with proprietary water proofing compound and finally finishing the surface with trowel and neat cement slurry and making of 300x300mm square. (e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test including cost of materials, labour complete as per specifications.and directions of the Engineer in charge.	Sqm	162.24	1073.52	
50	Fixing of door frames in an existing opening including embedding frame in floor and walls after cutting masonary for holdfasts for embedding holdfast in cement concrete 1:3:6 of 20mm and downsize granite metal painting two coats of coal tar to sides of frame,making good the damages to walls and floor as required and disposal of the debries with lead upto 50 m. including cost of materials, labour, complete as per specifications.and directions of the Engineer in charge. **Second Floor**	Nos	2.00	1475.28	

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				In Figures	In Words
51	Providing Honne wood frames of doors, windows, clerestory windows,ventilators and other frames , wrought, framed or assembled including making plaster groves (excluding cost of cement concrete and side clamps),but including cost of materials, labour, HOM of machineries complete as per specifications.and directions of the Engineer in charge. **Second Floor**	Cum	0.23	94612.32	
52	Providing and fixing in position fully panelled Honne wood shutters for doors, styles and rails of 40mm. thick with bottom and lock rails 180mm wide top rail and styles 100mm wide as per drawing and panels of 25mm thick including cost of materials, labour, HOM of machineries complete as per specifications.and directions of the Engineer in charge. **Second Floor**	Sqm	4.20	5108.40	
53	Providing and applying painting two coats (excluding priming coat) on new wood surface and / or wood based surface with enamel paint to give an even shade, cleaning the surface of all dirt, dust and foreign matter, sand papering including cost ofmaterials, labour, complete as per specifications.and directions of the Engineer in charge.	Sqm	4.96	104.76	
54	Pre-painted steel windows / ventilators & door frames: Supply and fixing of windows and top hung and fixed louered ventilatorsmade of pre-painted steel (base steel as per IS 513 of -0.58mm thick'D' quality, galvanized as per IS 277 with zinc of 120 GSM) with apolyester paint, of 12-16 microns thick and back coated with 5-7 micronsthick alkyd backer. Section for outer frame should be 46x52mm, sectionfor shutter should be 46x46mm, section for mullion should be 46x70mm,and section for beading should be 18x25mm and section for louvered ventilator should be 33x57mm the windows hould be pannaled with 5 mm thick plain float glass and 4mm pinhead glass for ventilators with rubber Gasket. The sections are to be cut to length, mitre joined with corner bracket and centre mullions are to be fixed using mullion cap. Handle made of high grade aluminium powder coated and nylon receiver. Corner brackets made of CRCA with Zinc Phosphate. Mullion caps made of glass filled nylon. The above frames should be ixed to the concrete/ masonry will by means of self-expanding screws. Including 10mm square bars with 6" pitch complete finished item of work. Double shutter 3'-0" X 4' - 0" (914.4MM x 1219.2 MM) outer frame section size of 46x52mm shutter frame section size of 46x46mm. complete as per specifications.and directions of the Engineer in charge.	Sqm	10.80	4162.32	
55	Providing and fixing M.S.grill work for windows and ventilators weighing 21kg/sqm using M.S. flats, or M.S. square rods, or combination of M.S. flats and square rods as per approve design, drawing including cutting steel sections and welding the same to required pattern with a coat of red lead primer, cost of materials, fixtures, labour and HOM of machinery complete as per specifications.and directions of the Engineer in charge.	kg	226.80	115.56	

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56	Providing and applying enamel metal paint two coats (excluding priming coat) over new steel or other metal surface brushing to give an even shade after cleaning oil, grease, dirt and other foreign matter, including cost of materials, labour, complete as per specifications.and directions of the Engineer in charge.	sqm	164.21	102.60	
57	Providing and fixing M.S. Hand railing for Balcony with 50mm dia. M.S. hollow pipe of 14 gauge, welded to 20mmx20mm M.S. square rod placed vertically, spaced at 100mm at regular intervals of 600mm. These vertical rods laterally tied to 3 horizontal rods spaced at equal interval. These assembly is fixed to concrete by using expansion bolts and welding the same to reinforcement bars and making good the surface. All the joints and sections hould be cut to length, welded and grinded wherever necessary etc., complete . The work includes cost of all materials, labour charges for all items of work, hire charges for welding, cutting and grinding equipment, and electricity charges, etc., complete as per specifications.and directions of the Engineer in charge.	Sqm	10.80	3080.16	
58	Door Frame - Entrance : Providing & fixing factory made Galvanized plain steel door frame of profile size 125 x 60 mm single rebate manufactured from galvanized plain steel sheet 1.25 mm thick, conforming to IS:277. The door frame consists of hinge jamb, lock jamb, head & bottom tie bars, supply in knockdown condition & to be assembled at site by mechanical means with special mitre joint. The bottom tie bar made out of galvanized plain steel sheet 1.60 mm thick pressed angle 20 x 20 mm screwed to the door frame. The stiffeners of 3 mm thick pre- punched & pre-trapped are to be welded inside the pre-punched slots of the door frames & 4 nos. of S.S. butt hinges 100 x 59 x 2.5 mm to be screwed to the door frame. The necessary stiffeners & mortar guards to be provided for fixing hardware fixtures. The door frame to be powder coated after pre- treatment of the surface. The door frame shall be filled with 1:3:6 cement concrete & to be fixed with adjustable lugs/ hold fasts. Alternatively, dry fixing shall be permitted by using metallic expansion bolt. The rate is including transportation, loading, unloading, HOM etc. but excluding the hardware fixtures. size 1000 x 2130 mm complete as per specifications.and directions of the Engineer in charge.	Rmt	28.80	588.60	

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				In Figures	In Words
59	Door Shutters Entrance : Providing & fixing factory made Galvanized steel door Shutters 32 mm thick manufactured from pre- painted Galvanized plain steel sheet 0.60 mm thick conforming to the IS: 14246. The door shutters consist of two outer skins if steel sheets, lock seam jointed at vertical stile edges, horizontal top & bottom sides to form a double skin fully flush shell. Rigid polyurethane Foam (PUF) of density 40 Kg/M3 shall be filled in the hollow portion of door shutters for structure rigidly & sound insulation. The necessary stiffeners of the Galvanized plain steel sheet of minimum thickness 1.60 mm to be provided for fixing all hardware fixtures. The rate is including transportation, loading, unloading, HOM etc. but excluding the hardware fixtures. size – 900 x 2035 x 32 mm thick. complete as per specifications.and directions of the Engineer in charge.	Sqm	21.00	2311.20	
60	Providing and fixing C.P brass towel rail 740mm length, 20mm dia with C.P brackets, fixed to wooden cleats with C.P brass screws including cost of materials, labour complete as per specifications.and directions of the Engineer in charge.	Unit	2.00	798.12	
61	Providing and fixing 7.5 cms to 15.00 cms dia NP grating 100 mm dia. complete as per specifications.and directions of the Engineer in charge.	Each	12.00	162.00	
62	Providing and fixing to wall, ceiling and floor unplasticised PVC 6.00 kgs/sqcm working pressure with pipe fittings, wall clips etc., and making good the wall, ceiling and floor for sanitary pipelines including cost of all materials,labour charges, HOM of acquirements and testing complete as per specifications.and directions of the Engineer in charge.	Rmt	90.00	468.72	
63	Providing and fixing to wall, ceiling and floor unplasticised PVC 6.00 kgs/sqcm working pressure with pipe fittings, wall clips etc., and making good the wall, ceiling and floor for sanitary pipelines including cost of all materials,labour charges, HOM of acquirements and testing complete as per specifications.and directions of the Engineer in charge.	Rmt	40.00	921.24	
64	Constructing brick masonry inspection chamber 600x600mm, and 450mm depth, (clear inside dimension) for single pipeline, using table moulded non-modular bricks of class designation 50 in cement mortar 1:5, C.I cover withframe (light duty) 455x610mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23kg and weight of frame 15 kg) R.C.C. top slab with cement concrete M 15 with 20mm and downsize granite metal, foundation concrete M 5 with 40mm and downsize granite metal inside plastering 12mm thick with cement mortar 1:3, finish smooth with a floating coat of cement on walls and bed concrete complete as per standard design including cost of materials, labour charges, curing complete as per specifications. Specification No. KBS 600x600mm and 450mm depth (clear inside dimension) for single pipeline, using table moulded non-modular bricks of class designation 50 in cement mortar 1:5, C.I cover withframe (light duty) 600x600mm. complete as per specifications.and directions of the Engineer in charge.	Nos.	3.00	9169.20	

Item No	Description of Work	Unit	Total Quantity as per Estimation	Rate as per estimate in Rs.	
				In Figures	In Words
65	Providing and placing on terrace, polyethylene water storage tanks with manhole lid and suitable locking arrangements, making holes of suitable diameter for inlet, outlet and over flow pipes, including cost of all materials, labour, transport charges, HOM of equipments and testing complete as per specifications.and directions of the Engineer in charge.	Each	1.00	7374.24	
66	Providing and fixing in position brass bib cock of approved quality 20mm nominal bore including cost of all materials, labour and HOM of equipments with all leads complete as per specifications.and directions of the Engineer in charge.	Each	12.00	186.84	
67	Providing and fixing in position brass stop cock of approved quality 20mm nominal bore including cost of all materials, labour and HOM of equipments with all leads complete as per specifications.and directions of the Engineer in charge.	Each	6.00	152.28	
68	Providing and fixing in position brass gate valve with C.I wheel of approved quality (screwed end) 20mm nominal bore including cost of all materials, labour and HOM of equipments with all leads complete as per specifications.and directions of the Engineer in charge.	Each	3.00	362.88	
69	Providing and fixing Chorinated Poly Venyl Chloride (CPVC) pipes conforming to IS 15778, having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings including fixing the pipe with clamp at 1.00 mtr spacing. This includes jointing of pipes and fittings with one step CPVC solvent cement & the cost of cutting chases & making good the same including testing of joints complete. (Concealed work including cutting chases and good the walls etc.,) complete as per specifications.and directions of the Engineer in charge.	Rmt	36.00	253.80	
70	Providing and fixing Chorinated Poly Venyl Chloride (CPVC) pipes conforming to IS 15778, having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings including fixing the pipe with clamp at 1.00 mtr spacing. This includes jointing of pipes and fittings with one step CPVC solvent cement & the cost of cutting chases & making good the same including testing of joints complete. (Concealed work including cutting chases and good the walls etc.,) complete as per specifications.and directions of the Engineer in charge.	Rmt	25.00	316.44	
71	Supplying, Installing, testing and commisioning electrically driven jockey pump of capacity 180.0 Lpm at 70.0m head with all the necessary accessories viz. Pressure guages etc. operating on 3Ph 50Hz, 400/440 V AC supply incldung foudnation, bolts etc. complete as per specifications.and directions of the Engineer in charge.	Nos	1.00	89611.92	

"OTS APPROVED"

Executive Engineer
BBMP

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